

Application No. 10/774,899
Amendment "A" dated September 28, 2005
Reply to Office Action mailed June 28, 2005

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figures 1, 8A, and 8B. These sheets, which include Figures 1, 8A, and 8B, replace the original sheets including the same figures.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

REMARKS

The present Amendment is in response to the Examiner's Office Action mailed June 28, 2005. Claims 1-36 were pending. Claims 1, 16, and 36 are amended. Claims 1-36 remain pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

I. Amended Drawings

The Office Action objects to the drawings under 35 C.F.R. §1.83(a), alleging their failure to show every feature of the invention as specified in the claims. In particular, the Office Action alleges that the drawings fail to show a clamp portion mechanically attached to a bracket portion through an aperture defined in an outer housing. Applicants respectfully disagree with the assertion made in the Office Action by noting that at least Figures 1 and 8B depict the

mechanical attachment of the clamp portion and the bracket portion through an aperture defined in an outer housing. For instance, Figure 1 depicts the aforementioned attachment, though Applicants note that the aperture of the outer housing 11 through which attachment is achieved is omitted by virtue of the figure's cut-away view. Figure 8B explicitly shows a similar clamping portion/bracket portion attachment scheme similar to Figure 1, wherein such attachment is established through an aperture 112 in the outer housing 11. The aperture 112, though partially seen in Figure 8B, is clearly depicted in Figure 8A.

In the interest of clarifying the above attachment arrangement, Figures 1, 8A, and 8B have been amended to include explicit numeric references as originally included in the specification and other accompanying figures, to the clamp portion 60 and the aperture 112. Applicants submit that no new matter has been added as a result of these amendments because each of these components was not only depicted in the drawings as originally submitted, but also explicitly referred to by its reference number in the specification. Indeed, the case of aperture 112, only an oversight prevented inclusion of its numeric designation in Figures 8A and 8B. For the Examiner's convenience, replacement sheets including amended Figures 1, 8A, and 8B, together with original sheets of these figures showing the changes made in red ink, are included as an attachment following page 25 of this Response. Entry of these drawing amendments and removal of the objections to the drawings is therefore respectfully solicited.

II. Objections to the Specification

The Office Action objects to paragraphs [045], [046], and [057] of the specification for containing various informalities. In response, Applicants have amended these paragraphs to

conform with the corrections requested by the Examiner. Entry of these amendments, together with removal of the objection to the specification, is therefore respectfully requested.

III. Rejection Under 35 U.S.C. § 112

The Office Action rejects claims 1-15 under 35 U.S.C. § 112 ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. In particular, the Office Action asserts that the specification fails to disclose an arrangement wherein a second mounting portion is mechanically attached to a first mounting portion through an aperture defined in an outer housing, as detailed in independent claims 1 and 8. In support of this assertion, the Office Action refers to Figures 2B and 6 and states stating that these figures fail to show the clamp portion being mechanically attached to the bracket portion through an aperture defined in the outer housing. In response, Applicants submit that Figures 2B and 6 depict only selected aspects of the present claimed invention and that it is Figures 1 and 8B that explicitly depict the clamp portion 60 and bracket portion 80 being mechanically attached through an aperture 112 defined in the outer housing 11. Further, paragraph [065] of the specification describes the particular details of the clamp and bracket portion attachment through the outer housing aperture. As discussed above, Figures 1 and 8A and 8B have been amended by this Response to clarify the positional relationship between these components. For the above reasons, then, removal of the rejections to claims 1-15 under Section 112 is respectfully solicited.

IV. Rejection Under 35 U.S.C. § 102

The Office Action rejects claims 1 and 7 under 35 U.S.C. §102(e) as being anticipated by United States Patent No. 6,644,853 B1 to Kantor *et al.* ("Kantor"). However, *Kantor* – assuming *arguendo* that it and the other references cited herein qualify as prior art – fails to teach each and every element of the pending claims, and thus is not an anticipatory reference.

In general, *Kantor* teaches an x-ray tube for use in dental x-ray operations that includes enhanced x-ray shielding and electrical insulation. In particular, and as shown in Figures 1 and 4, *Kantor* teaches a device including an x-ray tube head 16 associated with a tube end wall 18 and tubular assembly 20. A tube 30 is included in the tube head, and includes an envelope 32 in which an anode 34 is disposed. The envelope is slid axially into a first shield 54. The x-ray tube is supported in cantilever fashion from the first shield by a stem 67 and screw 72. See *Kantor*, col. 2, ll. 49-60; col. 3, ll. 11-31, 57-65; col. 4, ll. 1-18; Figs. 1, 4.

The claimed invention is substantially distinct from the device taught by *Kantor*. In particular, amended independent claim 1 requires, in an x-ray tube, the presence of an evacuated enclosure, an outer housing containing the evacuated enclosure, and a mounting assembly for supporting the evacuated enclosure within the outer housing, wherein the mounting assembly comprises a first mounting portion that mechanically attaches to the outer housing, and "a second mounting portion that mechanically attaches to a portion of the evacuated enclosure, the second mounting portion also being mechanically attached to the first mounting portion *through an aperture defined in the outer housing.*" *Kantor* discloses no such x-ray tube. Indeed, while the Office Action alleges that tubular assembly 20 and first shield 54 respectively teach the attachment of the first and second mounting portions required in claim 1, this is not so. First, the

disclosure and figures of *Kantor* fail to teach or suggest the first shield 54 being mechanically attached to the tubular assembly 20. Instead, col. 2, ll. 53-55 reveals that the tubular assembly 20 attaches not to the first shield but to a tube end wall 18 of the tube head 16, as clearly shown in Figure 1. Second, *Kantor*'s device further fails to teach the attachment of the first shield and tubular assembly *through an aperture defined in an outer housing* (tube head 16), though this point necessarily follows from the fact the two components do not mechanically attach.

Accordingly, for its failure to teach a second mounting portion that mechanically attaches to a first mounting portion through an aperture defined in an outer housing, *Kantor* fails to teach or suggest each and every element of independent claim 1 and therefore cannot be used to anticipate the present invention. Further, inasmuch as claims 2-7 are variously dependent on independent claim 1, they are also allowable for at least the reasons given above. Applicants therefore respectfully submit that each of the above claims is patentably distinct and request that the Section 102 rejection in view of *Kantor* be withdrawn.

The Office Action also rejects claims 8, 12-14, 30, 31, 33, 35, and 36 under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,303,283 to Jedlitschka ("Jedlitschka"). Because, however, *Jedlitschka* fails to teach or suggest each and every claim limitation of the pending claims, Applicants respectfully traverse this rejection.

Jedlitschka is generally directed to an x-ray device modified to enable placement of one or more high voltage power supply devices in connection with the x-ray device. In particular, the background portion of *Jedlitschka* describes an x-ray tube 10 shown in Figure 1 that is included in a casing 12 filled with an insulating and cooling fluid 14. The casing 12 is opaque to x-rays except at one location 16 through which the x-rays are emitted. The x-ray tube is

maintained in position within the casing by brackets or clamps, indicated at 44 and 46, which in turn are fixedly joined to the casing. See *Jedlitschka*, col. 4, ll. 30-34; col. 1, ll. 16-27, 66-68; Figure 1.

Applicants submit that the claimed invention is substantially different from the device taught by the background portion of *Jedlitschka*. In particular, independent claim 8 requires, in an x-ray tube, the presence of a mounting assembly for joining an evacuated enclosure to an outer housing, wherein the mounting assembly includes a bracket portion that attaches to a portion of the outer housing, and “a clamp portion that frictionally engages a portion of the evacuated enclosure proximate an x-ray transmissive window *that is located on a surface of the evacuated enclosure....*” The disclosure of *Jedlitschka* fails to teach such a mounting assembly. Indeed, Figure 1 of *Jedlitschka* fails to teach even a window located on a surface of the tube 10 (evacuated enclosure), and as such cannot teach a clamp portion that frictionally engages a portion of the evacuated enclosure proximate such a window, as is explicitly required by claim 8. Further, even if the device taught by *Jedlitschka* included a window on the evacuated enclosure for passage of x-rays through casing location 16, the bracket 44 alleged by the Examiner to teach the clamp portion of the present claim would neither attach proximate such a window nor frictionally engage the evacuated enclosure, as required.

Consequently, *Jedlitschka* fails to teach or suggest each and every element of independent claim 8 and thus cannot be used to anticipate the present invention. Independent claims 30 and 36, which require clamp portions that frictionally engage or attach directly or proximately to a window of the evacuated enclosure, are therefore also allowable for *Jedlitschka*'s failure to teach or suggest at least these limitations. Thus, independent claims 8,

30, and 36, together with their respective dependent claims, are allowable for at least the reasons given above. Applicants therefore respectfully submit that each of the above claims is patentably distinct and request that the Section 102 rejection in view of *Jedlitschka* be withdrawn.

V. Rejection Under 35 U.S.C. § 103

The Office Action rejects claims 2 and 3 under 35 U.S.C. §103(a) as being unpatentable over *Kantor* as applied to claim 1.

Applicants note that each of the above rejections is based upon the *Kantor* reference. It is further noted that each of the rejected claims above is dependent upon independent claim 1. As was previously discussed, the teachings of *Kantor* are inapplicable to the present invention as applied to independent claim 1 for failing to teach or suggest each of the limitations contained in those claims. Thus, *Kantor* is equally inapplicable to the present claims rejected under Section 103 for at least the same reasons, that is, its failure to teach or suggest all of the claim limitations contained not only in independent claim 1, but also the limitations contained in the present rejected dependent claims. Thus, the Examiner has failed to make out a *prima facie* case of obviousness. Applicants therefore submit that claims 2 and 3 are allowable and that the above rejection under Section 103 should be withdrawn.

VI. Allowable Subject Matter

Claims 32 and 34 are objected to in the Office Action as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Because claims 32 and 34 are dependent upon

independent claim 30, which claim is allowable for at least the reasons given above, Applicants submit that these claims are allowable as well and respectfully solicit the removal of the objection to claims 30 and 32. Applicants thank the Examiner for allowance of claims 16-29.

Applicants submit the following comments concerning the Examiner's statements of reasons for the indication of allowable subject matter in the Office Action. Applicants agree with the Examiner that the claimed invention of claims 16-29 is patentable over the prior art, but respectfully disagree with the Examiner's statement of reasons for allowance as set forth in Office Action. Applicants submit that it is the claim as a whole, rather than any particular limitation, that makes each of the claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicants do not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable and do not make any admission or concession concerning the Examiner's statement in the Office Action.

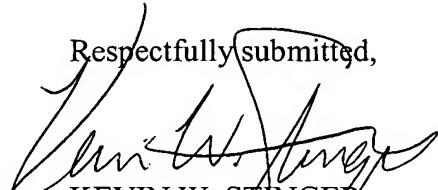
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CONCLUSION

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 28th day of September, 2005.

Respectfully submitted,



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Title: MOUNTING SYSTEM FOR AN X-RAY TUBE
Inventors: David Craig Smith, et al.
Docket No.: 14374.105

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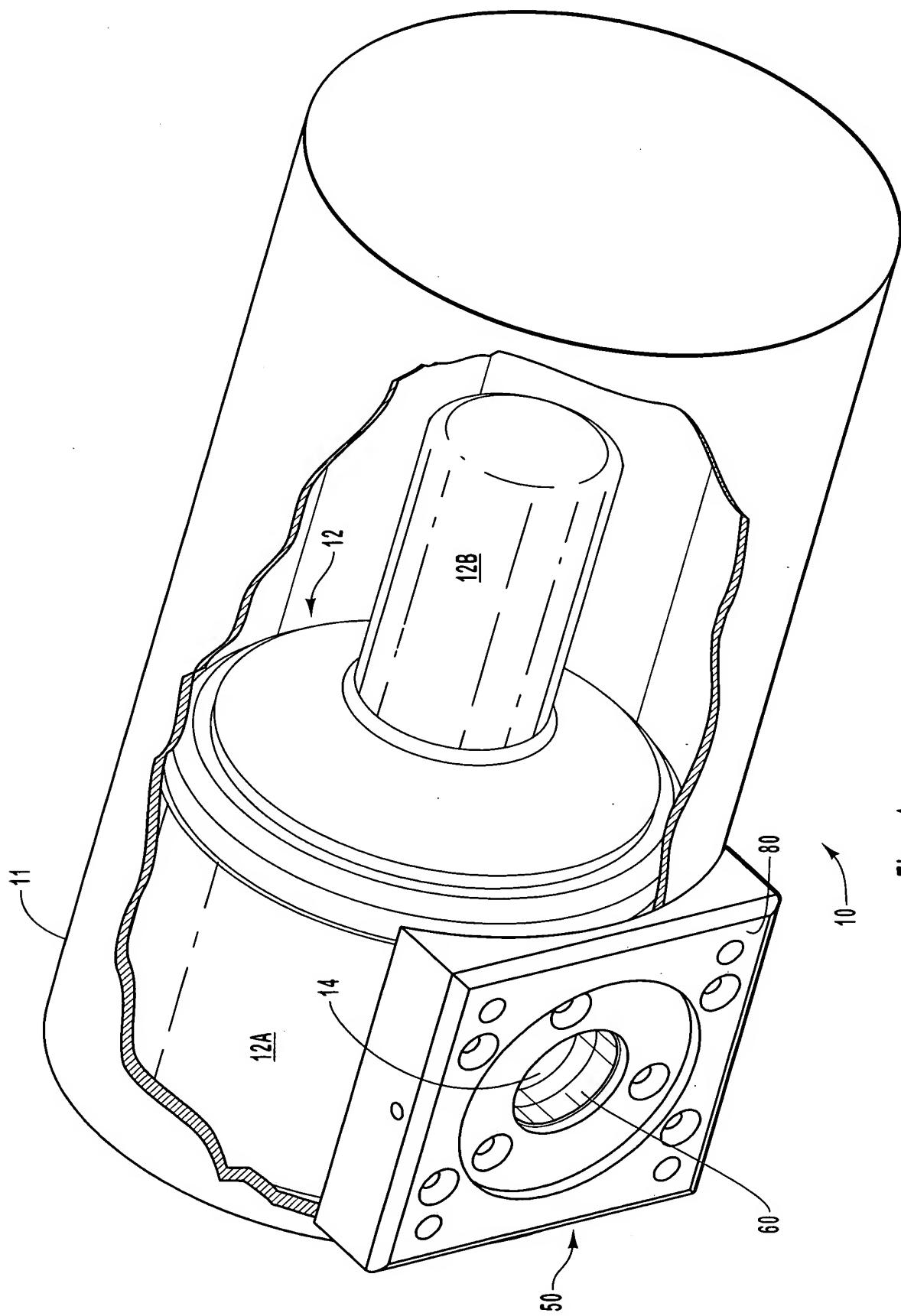


Fig. 1

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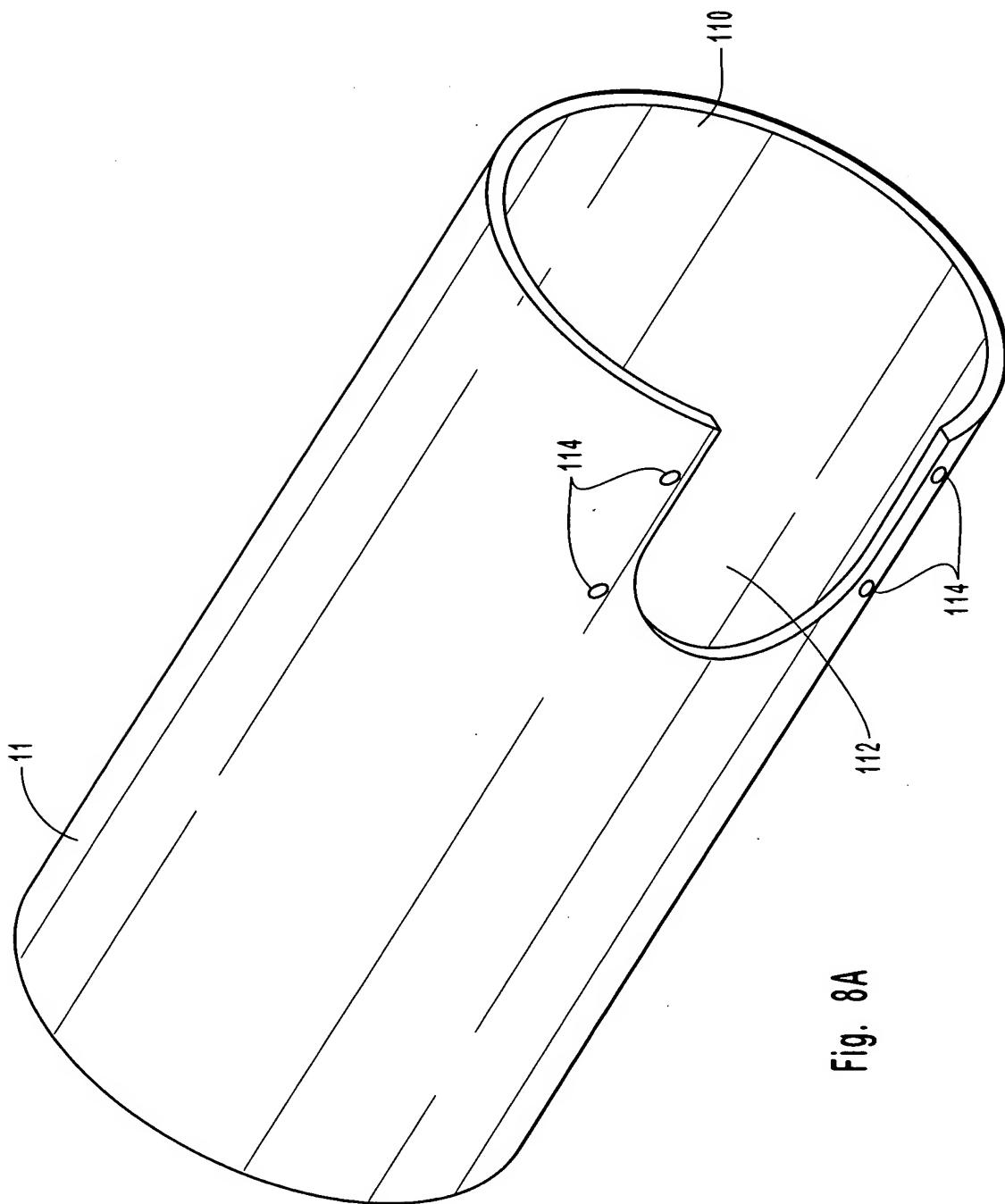


Fig. 8A

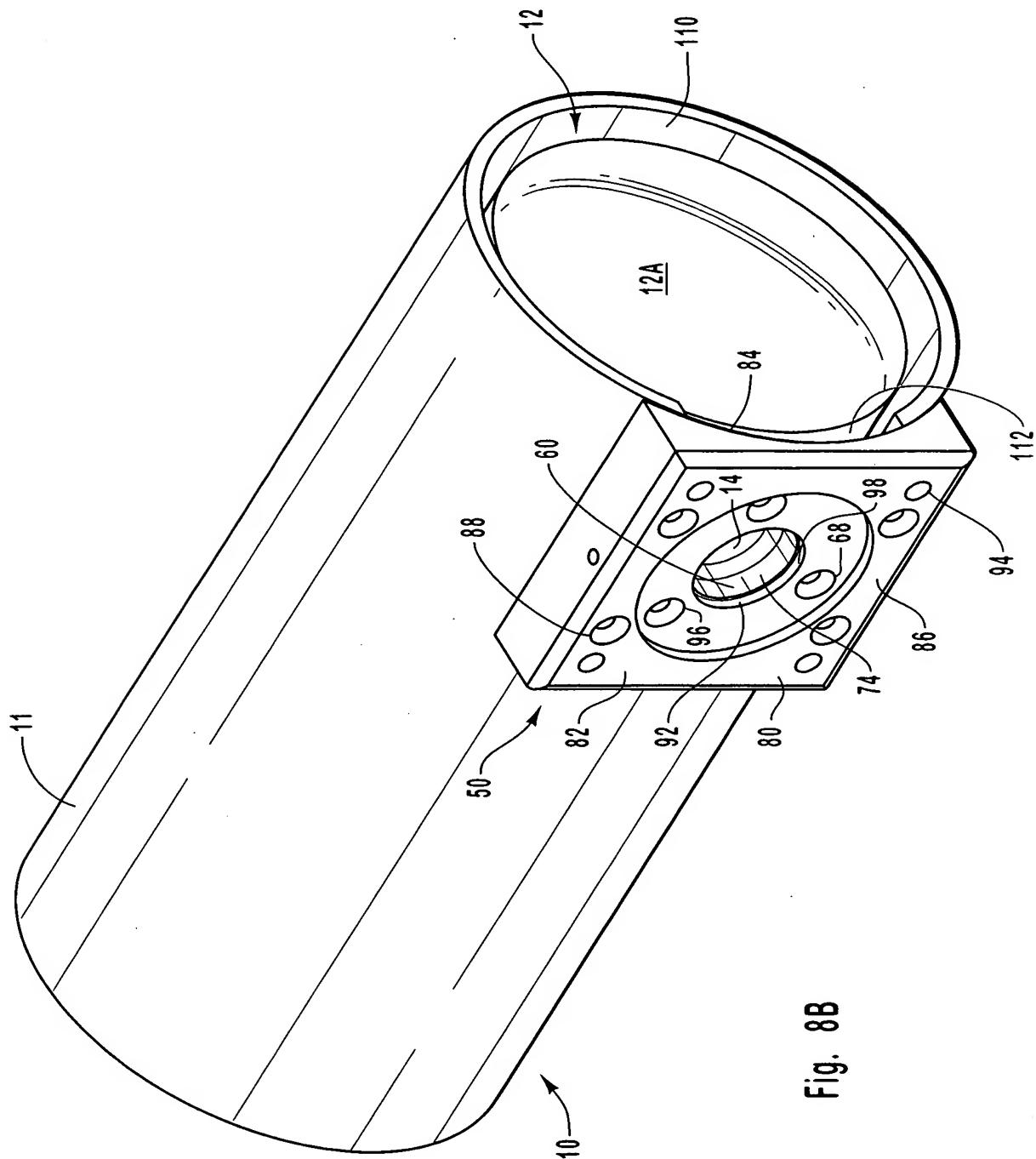


Fig. 8B